

CLAIMS:

1. A device for analysis of materials by means of radiation, including
* a radiation source (6) for producing the radiation (42),
* a sample location (8) for accommodating a sample (10) of the material to be analyzed,
5 * a position sensitive detection device (9) for detecting the radiation (45) emanating from the sample,
* which detection device includes
- an array (42) of radiation sensitive detector elements (44),
- an electronic read-out circuit (48) which is connected to the detector
10 array and includes charge amplifiers (58) in a one-to-one relationship with the detector elements (44), the input of said charge amplifiers being connected to a respective one of the detector elements,
characterized in that
the charge amplifiers (58) are constructed in the integrated bipolar technique, and that the
15 electronic read-out circuit (48) includes signal processing circuits (74-82) which are connected to the outputs of the charge amplifiers and are constructed in the digital technique.
2. A device as claimed in claim 1, wherein the digital signal processing circuits are accommodated on the same substrate as the charge amplifiers.
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3. A device as claimed in claim 2, wherein the digital signal processing circuits are constructed by means of a BICMOS process in the form of the Current Mode Logic (CML) technique.
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- 25 4. A device as claimed in one of the preceding claims, wherein the assembly formed by the detector array (42) and the electronic read-out circuits (48) is accommodated on a common support (55) made of a ceramic material.
- Sub 141*

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5. A position sensitive detection device for detecting radiation as defined in one of the preceding claims.

of the preceding claims.

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